

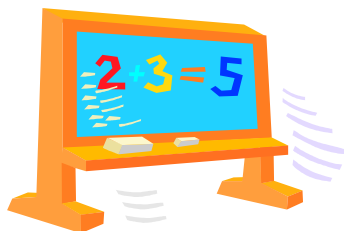


# Supporting your child at home.

National Numeracy Framework 2013

Numeracy Guidelines

A booklet for Year 5 parents



## Literacy and Numeracy Framework (LNF)

The Welsh Government has introduced the LNF into schools in Wales. It is statutory from September 2013.

The LNF is made up of two components, the National Literacy Framework (NLF) and the National Numeracy Framework (NNF).

The statements in this booklet describe the *numeracy* component of the framework and show the *mathematical skills* which will be taught across the curriculum during Year 5.

These statements describe the annual national expectations for *numeracy* for learners at the end of Year 5.

### The National Numeracy Framework (NNF)

#### What do we mean by Numeracy?



Numeracy refers to the **application** of mathematical understanding in daily activities at school, at home, at work, and in the community. There is more to numeracy than teaching the rules and procedures of mathematics. However, **it is imperative that the fundamental mathematical techniques are taught to a standard that allows learners to be numerate.**

Numeracy describes the set of skills needed to tackle **real-world problems** in a variety of situations by applying numerical reasoning in order to plan how to solve the problem, and then carrying out the mathematical procedures to find the solution. **Numeracy is different to the mathematics subject in that it is the application of the skills learned in mathematics in a cross-curricular, real-world.**

Both the *LITERACY* and *NUMERACY* components are broken into STRANDS.

### The Numeracy Strands

**Strand 1 - Developing numerical reasoning**

**Strand 2 - Using number skills**

**Strand 3 - Using measuring skills**

**Strand 4 - Using data skills**

**These are the *mathematical* skills your child will develop during Year 5.**

### **Strand 1 - Developing Numerical Reasoning**

**Identify processes and connections**

- transfer mathematical skills to a variety of contexts and everyday situations
- identify the appropriate steps and information needed to complete the task or reach a solution
- select appropriate mathematics and techniques to use
- select and use suitable instruments and units of measurement
- choose an appropriate mental or written strategy and know when it is appropriate to use a calculator
- estimate and visualise size when measuring and use the correct units

**Represent and communicate**

- explain results and procedures clearly using mathematical language
- refine informal methods of recording written calculations, moving to formal methods of calculation when developmentally ready
- use appropriate notation, symbols and units of measurement

**Review**

- select and construct appropriate charts, diagrams and graphs with suitable scales
- select from an increasing range of checking strategies to decide if answers are reasonable
- interpret answers within the context of the problem and consider whether answers, including calculator, analogue and digital displays, are sensible
- draw conclusions from data and recognise that some conclusions may be misleading or uncertain

## Strand 2 – Using Number Skills

### Use number facts and relationships

- read and write numbers to 100 000
- compare numbers with 1 and 2 decimal places
- recall 2, 3, 4, 5, 6, 8 and 10 multiplication tables and use to solve division problems
- multiply and divide numbers and decimals by 10 and 100

### Fractions, decimals, percentages and ratio

- use understanding of simple fraction and decimal equivalences when measuring and calculating, e.g.  $\frac{1}{2} = 0.5$ ,  $\frac{1}{10} = 0.1$
- calculate fractional quantities, e.g.  $\frac{1}{8}$  of 24 = 3, so  $\frac{5}{8}$  of 24 = 15
- use doubling and halving strategies when working with simple proportions

### Calculate using mental and written methods

- find differences between numbers with 1 decimal place
- add and subtract 3-digit numbers using an appropriate mental or written method
- multiply and divide 3-digit numbers by a single-digit number

### Estimate and check

- check answers using inverse operations
- estimate by rounding to the nearest 10, 100 or 1000

### Manage money

- order and compare the cost of items up to £1000
- add and subtract totals less than £100 using correct notation, e.g. £28.18 + £33.45
- plan and track money and savings by keeping accurate record
- realise that budgeting is important

## Strand 3 – Using Measuring Skills

### Length, weight/mass, capacity

- measure perimeters
- use measuring instruments with 10 equal divisions between each major unit, and record using decimal notation, e.g. 4.2cm, 1.
- make use of conversions, e.g.  $\frac{1}{4}$  of a km = 250m

### Time

- read and use analogue and digital clocks
- time events in minutes and seconds, and order the results
- carry out practical activities involving timed events and explain which unit of time is the most appropriate

### Temperature

- measure and record temperatures involving positive and negative readings
- calculate temperature differences, including those involving temperature rise and fall across 0°C

### Area and volume Angle and position

- calculate, estimate and compare the area of squares and rectangles using standard units
- find volumes by counting and other practical methods
- use coordinates to specify location

## Strand 4 – Using Data Skills

### Collect and record data, present and analyse data & interpret results

- represent data using:
  - lists, tally charts, tables, diagrams and frequency tables
  - bar charts, grouped data charts, line graphs and conversion graphs
- extract and interpret information from an increasing range of diagrams, timetables and graphs (including pie charts)
- use mean, median, mode and range to describe a data set.